NRZ-TO-RZ CONVERSION FOR COMMUNICATION SYSTEMS

ABSTRACT OF THE DISCLOSURE

A driver, e.g., for use with electro-optic (E/O) modulators. The driver is configured to generate a driving signal based on an electronic NRZ input data signal and an input clock signal. The driver converts the NRZ input data signal to an RZ format and produces an amplified RZ signal that can be applied to an E/O modulator. The amplification gain of the driver is adjustable to enable interfacing with different modulators. In one embodiment of the invention, the driving signal is generated based on a comparison between the NRZ input data signal and an offset clock signal generated from the input clock signal. The width of pulses in the driving signal, e.g., corresponding to logical "ones," may be tuned by, e.g., changing the DC offset of the clock signal. The driver may be implemented as an ASIC configured to operate at the data rate of, e.g., 10 GBit/s.